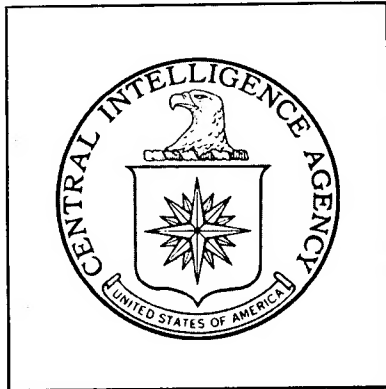


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**DIRECTORATE OF
INTELLIGENCE**

**Industrial Facilities
(Non-Military)**

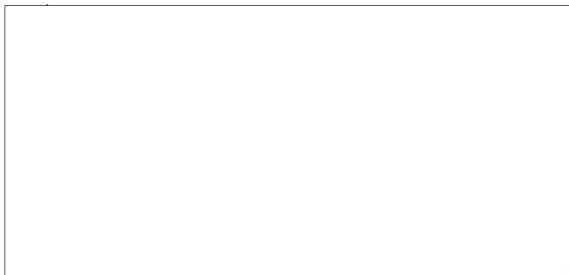
Basic Imagery Interpretation Report

Shih-chia-chuang Nitrogen Fertilizer Plant

Shih-chia-chuang, China



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TITLE	NPIC	SEC. CLASS.	LOCATION
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TOP SECRET RUFFCENTRAL INTELLIGENCE AGENCY
Directorate of Intelligence
Imagery Analysis Service

BCS - 13/0115/69

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INSTALLATION OR ACTIVITY NAME		COUNTRY
Shih-chia-chuang Nitrogen Fertilizer Plant		CH
UTM COORDINATES	GEOGRAPHIC COORDINATES	WAC-PIC NO.
50SKT844163	38-04-20N 114-31-35E	0382-11J
MAP REFERENCE		
ACIC. USATC 200. Sheet M0382-14HL, 3rd edition, May 67, Scale 1:200,000		
(SECRET)		
LATEST IMAGERY USED		NEGATION DATE (If required)
		Not Required

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ABSTRACT

Construction of the Shih-chia-chuang Nitrogen Fertilizer Plant was begun prior to [redacted]. The major production facilities were first seen complete on coverage of [redacted]. Ammonium nitrate and probably urea are the primary products of this plant. No production facilities for secondary products could be positively identified. The plant appeared to be in operation on all photography studied for the period from [redacted] to [redacted]. There has been no significant expansion in facilities since [redacted].

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INTRODUCTION

The Shih-chia-chuang Nitrogen Fertilizer Plant is located in Hopei Province, approximately 2.5 nautical miles (nm) north-northeast of Shih-chia-chuang. The plant is situated in an industrial area which includes an iron and steel plant, a cotton mill, a coke plant, two iron plants, an ammunition plant, and three railroad yards.

A canal, located to the immediate north, supplies water to the fertilizer plant. The Shih-chia-chuang Heat and Thermal Power Plant 
, located approximately 0.5 nm south-southwest, furnishes steam and electrical power. There is a small electrical power substation within the plant area. The plant is served by both rail and road.

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BASIC DESCRIPTIONPhysical Features

The plant is basically rectangular in shape, measures approximately 2,655 by 1,865 feet, and occupies approximately 115 acres. It is secured by a wall. The plant layout is very similar to that observed at the Kai-yuan Chemical Plant. Both are more compact in design than some of the earlier fertilizer plants in China, such as Tai-yuan and Lan-chou, which were built with Soviet assistance.

Operational Functions

The primary products of the Shih-chia-chuang Nitrogen Fertilizer Plant are ammonium nitrate and probably urea. No production facilities for secondary products could be positively identified.

Coal gasification and air separation produce the necessary gases for ammonia synthesis. Nitric acid, produced by oxidizing ammonia, is then reacted with ammonia to yield ammonium nitrate. Ammonia and carbon dioxide are mixed in an autoclave to make urea.

The major production facilities for nitrogenous fertilizer have been identified and annotated on Figure 3. There are three large processing buildings which could not be identified; however, their location and access to ammonia would indicate that their function is the production of ammonia-based compounds. These buildings are very similar in appearance and relative location to unidentified buildings seen at several other nitrogenous fertilizer plants in China.

Construction Chronology

The ammonium nitrate facilities appeared to be near completion by March 1963. Construction of the urea prilling tower and its associated equipment and building did not begin until August 1965, and was completed by June 1966. There were no significant additions to the fertilizer plant after 1966.

Production Activity

Coal was first observed in the receiving yard in March 1965. The plant was first seen complete in June 1966. Other indicators of production activity were the appearance of vapors from some of the processing units in September 1968, fluctuations in the amount of rail traffic at the plant, and the apparent changing amounts of gas stored in the gasholders.

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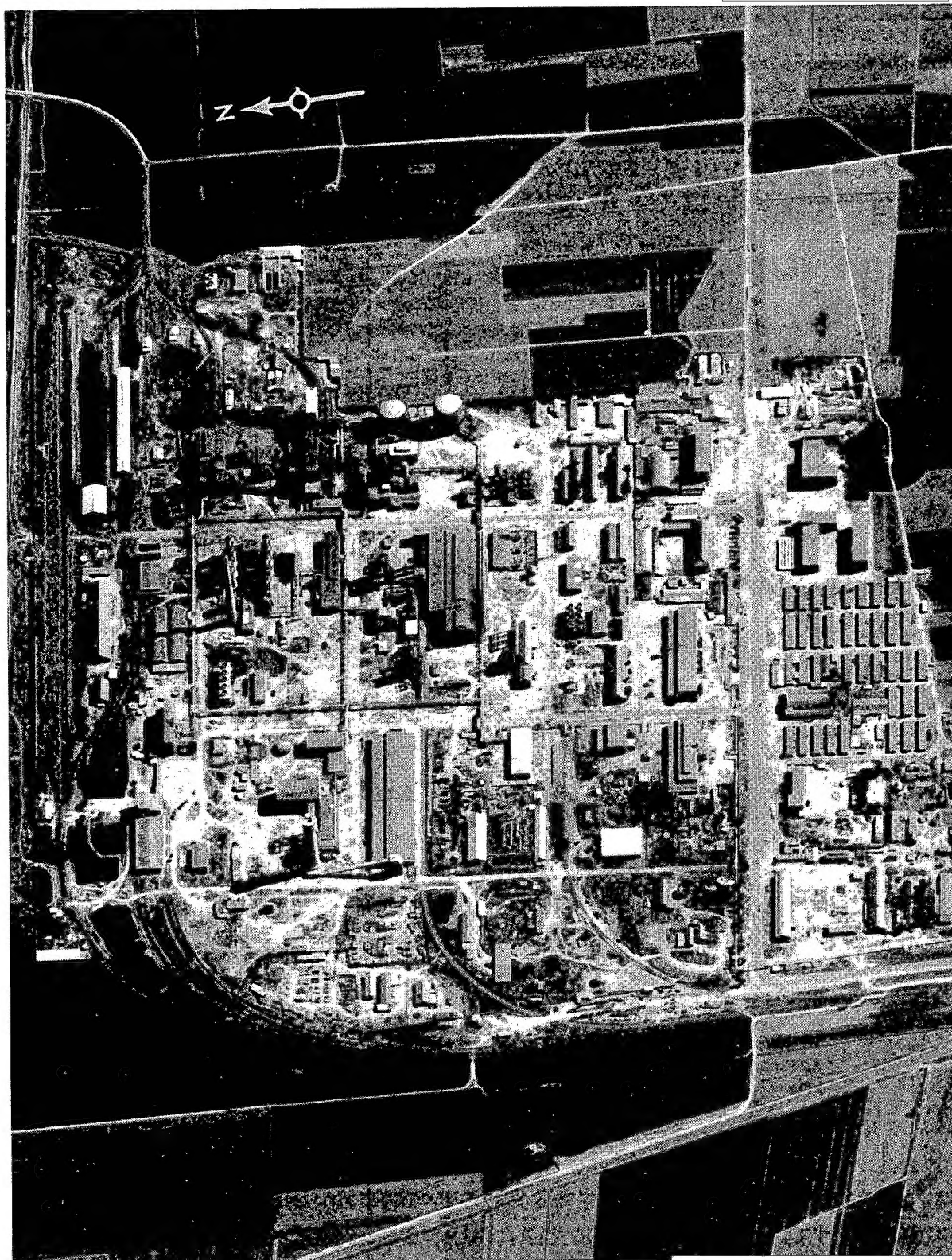


FIGURE 2. NITROGEN FERTILIZER PLANT, SHIH-CHIA-CHUANG, CHINA,

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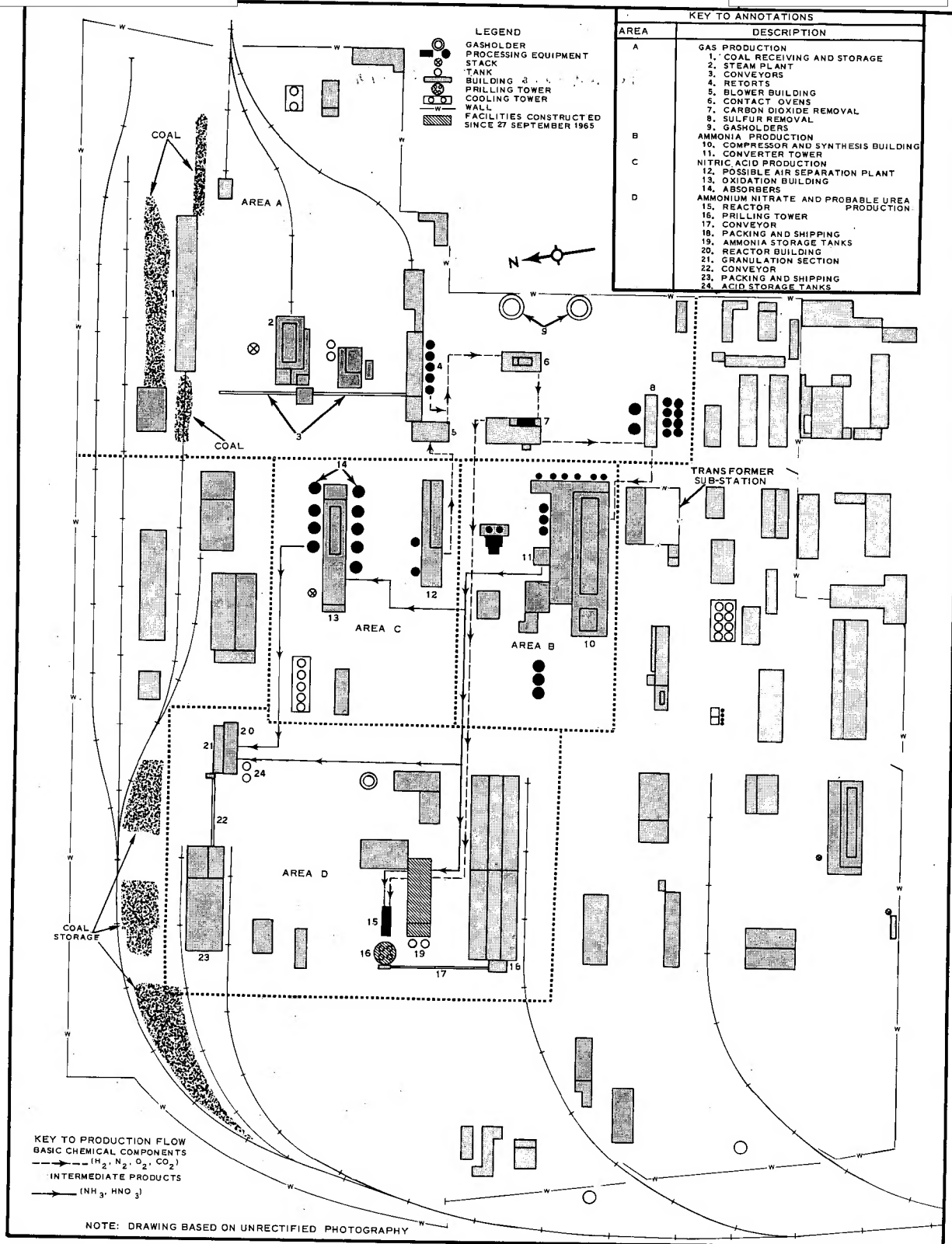


FIGURE 3. NITROGEN FERTILIZER PLANT, SHIH-CHIA-CHUANG, CHINA

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REFERENCES

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Maps

ACIC. US Air Target Chart 200, Sheet M0382-14HL, 3rd edition, May 1967,
Scale 1:200,000 (SECRET [redacted])

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Documents

1. CIA. PIR 65082, Shih-men Nitrogen Fertilizer Plant, Shih-men,
China, February 1966 (TOP SECRET RUFF, [redacted])

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Requirement

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